

## CLAIMS:

1. A low-pressure gas discharge lamp that comprises, in a gas-discharge vessel, one or more inert gases as a buffer gas or gases, an indium halide and means for producing and maintaining a low-pressure gas discharge, characterized in that the indium halide is present as a monohalide and present in addition is a means that binds oxygen and water.

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2. A low-pressure gas discharge lamp as claimed in claim 1, characterized in that the means that binds oxygen and water binds oxygen and the oxygen in water more strongly, and halogen more weakly, than indium does.

10 3 A low-pressure gas discharge lamp as claimed in claims 1 and 2, characterized in that indium, gallium, germanium, boron, molybdenum and/or tungsten is present as the means that binds oxygen and water.

4 A low-pressure gas discharge lamp as claimed in claims 1 to 3, characterized  
15 in that it comprises an inert gas from the group helium, neon, argon, krypton and/or xenon as a buffer gas.

5. A low-pressure gas discharge lamp as claimed in claims 1 to 4, provided with capacitive means for excitation and maintaining a low pressure discharge comprising at least  
20 one external electrode and means for maintaining a high frequency alternating field.

6. A low-pressure gas discharge lamp as claimed in claims 1 to 4, provided with electrical means for excitation and maintaining a low pressure discharge comprising at least one internal electrode made from high-melting material.

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7. A low-pressure gas discharge lamp as claimed in claim 6, wherein the internal electrode is provided with a material of low work function.

8. A low-pressure gas discharge lamp as claimed in claims 1 to 4, provided with inductive means for excitation and maintaining a low pressure discharge selected from the group comprising coils and antennae and means for maintaining a high frequency alternating field.

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9. Illumination system, comprising a low pressure discharge lamp according to claim 1 to 8.

10. Illumination system according to claim 9, selected from the group of tanning devices, backlighting of LCD-displays, UV-disinfection devices and UV-curing devices.

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